6BL7-GTA

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MEDIUM-MU TWIN TRIODE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Voltage	6.3	ac or dc volts
Current	1.5	amp

Direct Interelectrode Capacitances (Approx.):○

	Unit No.1	*Unit No.2*	
Grid to plate	6	6	μμf
Grid to cathode and heater	4.2	4.6	μμf
Plate to cathode and heater	0.9	0.9	μμf

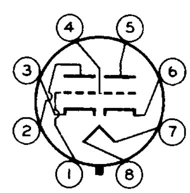
Characteristics, Class A_1 Amplifier (Each Unit):

Plate Voltage	150	250	250	volts
Grid Voltage	0	−17	−9	volts
Amplification Factor	–	–	15	
Plate Resistance (Approx.)	–	–	2150	ohms
Transconductance	–	–	7000	μmhos
Plate Current	65*	4	40	ma
Grid Voltage (Approx.) for plate current of 50 μa	–	–	−23	volts

Mechanical:

Operating Position	Any
Maximum Overall Length	3-5/16"
Maximum Seated Length	2-3/4"
Maximum Diameter	1-9/32"
Dimensional Outline	*See General Section*
Bulb	T9
Base	Short Intermediate-Shell Octal 8-Pin with External Barriers (JETEC No.B8-58)
Basing Designation for BOTTOM VIEW	8BD

Pin 1 - Grid of Unit No.2
Pin 2 - Plate of Unit No.2
Pin 3 - Cathode of Unit No.2
Pin 4 - Grid of Unit No.1



Pin 5 - Plate of Unit No.1
Pin 6 - Cathode of Unit No.1
Pin 7 - Heater
Pin 8 - Heater

VERTICAL DEFLECTION OSCILLATOR♦

Unless Otherwise Specified, Values are for Each Unit

Maximum Ratings, *Design-Center Values:*

For operation in a 525-line, 30-frame system□

DC PLATE VOLTAGE	500 max.	volts
PEAK NEGATIVE-PULSE GRID VOLTAGE	400 max.	volts

○,*,♦,□: See next page.

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CATHODE CURRENT:			
Peak	210	max.	ma
DC	60	max.	ma
PLATE DISSIPATION:			
Either plate	10	max.	watts
Both plates (Both units operating)	12	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	200	max.	volts
Heater positive with respect to cathode	200▲	max.	volts

Maximum Circuit Values:

Grid-Circuit Resistance	4.7	max.	megohms

VERTICAL DEFLECTION AMPLIFIER♦

Unless Otherwise Specified, Values are for Each Unit

Maximum Ratings, *Design-Center Values Except as Noted:*

For operation in a 525-line, 30-frame system□

DC PLATE VOLTAGE	500	max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE#			
(Absolute maximum)	2000■	max.	volts
PEAK NEGATIVE-PULSE GRID VOLTAGE	250	max.	volts
CATHODE CURRENT:			
Peak	210	max.	ma
DC	60	max.	ma
PLATE DISSIPATION:			
Either plate†	10	max.	watts
Both plates (Both units operating)	12	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	200	max.	volts
Heater positive with respect to cathode	200▲	max.	volts

Maximum Circuit Values:

Grid-Circuit Resistance:			
For Cathode-bias operation†	4.7	max.	megohms

○ Without external shield.

* This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

♦ When this tube type is operated as a combined vertical deflection oscillator and amplifier, it is recommended that unit No. 1 (pins 4, 5, and 6) be used as the oscillator.

□ As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

▲ The dc component must not exceed 100 volts.

This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.

■ Under no circumstances should this absolute value be exceeded.

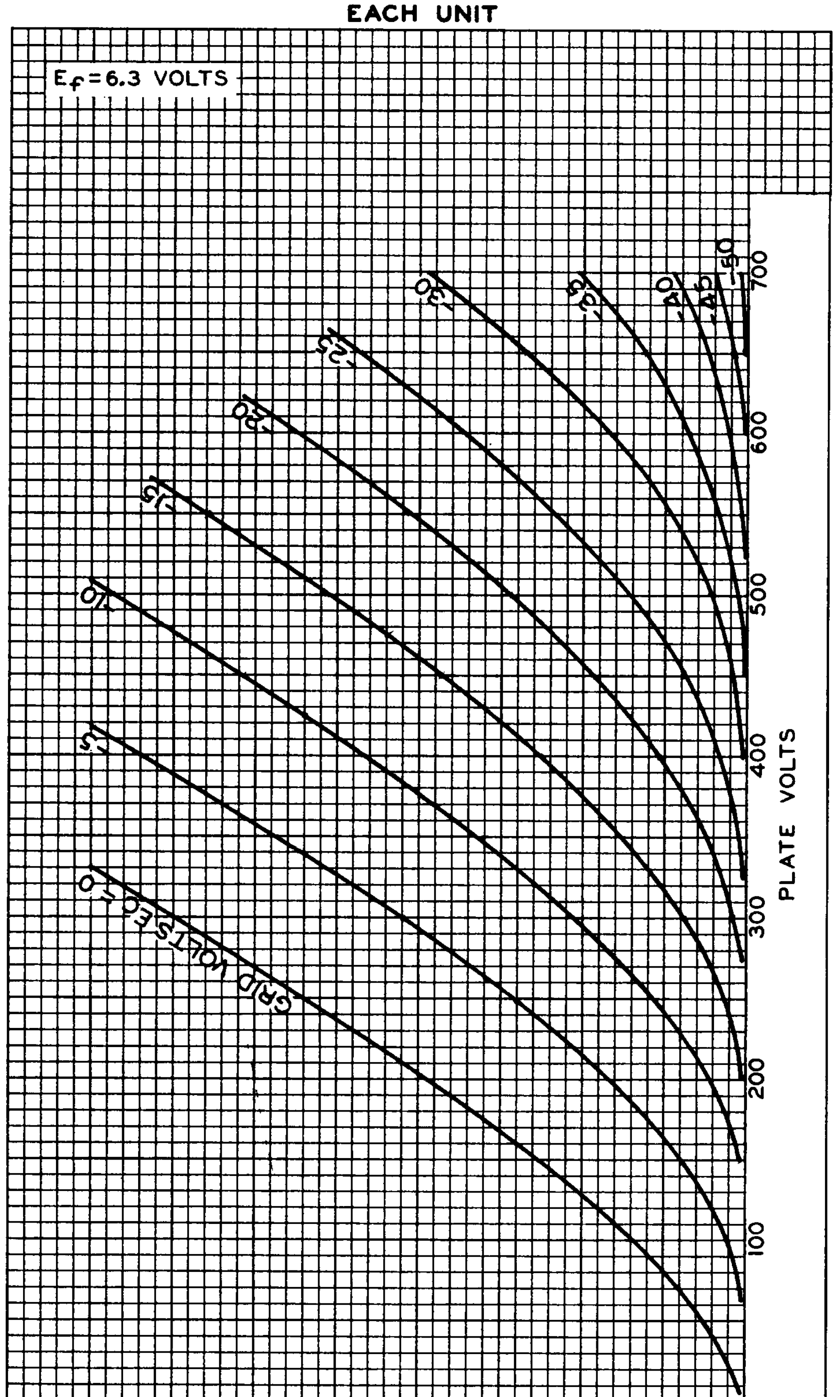
† In stages operating with grid-resistor bias, an adequate cathode resistor or other suitable means is required to protect the tube in the absence of excitation.

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AVERAGE PLATE CHARACTERISTICS

EACH UNIT



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